GenCore version 4.5

OM protein - protein search, using sw model

Run on: March 15, 2001, 10:36:10 ; Search time 35.6 Seconds
(without alignments)
4.802 Million cell updates/sec

Title: US-09-288-719-1
Perfect score: 28
Sequence: 1 GGGGS 5

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 268485 seqs, 34193795 residues

Total number of hits satisfying chosen parameters: 268485

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_36:*
1: /SIDS1/gcgdata/geneseq/geneseqp/AA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqp/AA1981.DAT:*
3: /SIDS1/gcgdata/geneseq/geneseqp/AA1982.DAT:*
4: /SIDS1/gcgdata/geneseq/geneseqp/AA1983.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqp/AA1984.DAT:*
6: /SIDS1/gcgdata/geneseq/geneseqp/AA1985.DAT:*
7: /SIDS1/gcgdata/geneseq/geneseqp/AA1986.DAT:*
8: /SIDS1/gcgdata/geneseq/geneseqp/AA1987.DAT:*
9: /SIDS1/gcgdata/geneseq/geneseqp/AA1988.DAT:*
10: /SIDS1/gcgdata/geneseq/geneseqp/AA1989.DAT:*
11: /SIDS1/gcgdata/geneseq/geneseqp/AA1990.DAT:*
12: /SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*
13: /SIDS1/gcgdata/geneseq/geneseqp/AA1992.DAT:*
14: /SIDS1/gcgdata/geneseq/geneseqp/AA1993.DAT:*
15: /SIDS1/gcgdata/geneseq/geneseqp/AA1994.DAT:*
16: /SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*
17: /SIDS1/gcgdata/geneseq/geneseqp/AA1996.DAT:*
18: /SIDS1/gcgdata/geneseq/geneseqp/AA1997.DAT:*
19: /SIDS1/gcgdata/geneseq/geneseqp/AA1998.DAT:*
20: /SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
21: /SIDS1/gcgdata/geneseq/geneseqp/AA2000.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	28	100.0	5	14	R34034	Linking sequence w
2	28	100.0	5	16	R72707	Linker for apo A-I
3	28	100.0	5	17	R95062	scFv spacer peptid
4	28	100.0	5	18	W17094	Gly(4)-Ser linker
5	28	100.0	5	18	W19543	Chimeric protein p
6	28	100.0	5	20	Y43496	Linker for dual av
7	28	100.0	5	20	Y33597	VH-VL domain linke
8	28	100.0	5	20	Y25357	IFNAR2/IFN-beta co
9	28	100.0	5	20	Y02127	Peptide linker use
10	28	100.0	5	21	Y83210	Peptide linker use
11	28	100.0	5	21	Y43750	Linker used to con
12	28	100.0	5	21	Y54917	Linker from IL-12
13	28	100.0	6	15	R62168	U1 snRNP 70K prote
14	28	100.0	6	18	W17095	Gly(5)-Ser linker
15	28	100.0	6	18	W21967	Linker #1 for immu
16	28	100.0	7	17	R99245	(Gly6)Ser linker.
17	28	100.0	7	20	Y23703	Peptide identified
18	28	100.0	7	20	Y02129	Peptide linker use
19	28	100.0	8	17	R86795	GM-CSF/EPO linker
20	28	100.0	8	20	Y43498	Linker for dual av
21	28	100.0	8	21	Y83212	Peptide linker use
22	28	100.0	9	14	R31941	In vivo tumour bin
23	28	100.0	9	16	R77978	Conserved Tbp2 pep
24	28	100.0	9	18	W08976	Conserved epitope
25	28	100.0	9	18	W43015	Conserved epitope
26	28	100.0	9	19	W54140	H. influenzae Tbp2
27	28	100.0	9	19	W54141	H. influenzae Tbp2
28	28	100.0	9	21	Y51796	H. influenzae tran
29	28	100.0	9	21	Y51797	H. influenzae tran
30	28	100.0	9	21	Y80384	H. influenzae tran
31	28	100.0	9	21	Y80385	H. influenzae tran
32	28	100.0	11	17	R99242	(Gly4Ser)2Ser link
33	28	100.0	11	17	R91061	Linker peptide use
34	28	100.0	11	19	W59848	Amino acid sequenc
35	28	100.0	12	21	Y79553	Linker peptide use
36	28	100.0	13	20	Y43499	Linker for dual av
37	28	100.0	13	20	Y25363	IFNAR2/IFN-beta co
38	28	100.0	13	20	Y06843	Peptide sequence f
39	28	100.0	13	21	Y83213	Peptide linker use
40	28	100.0	13	21	Y83220	Peptide linker use
41	28	100.0	13	21	Y80115	IL-6R and IL-6 fus
42	28	100.0	13	21	Y44696	Peptide linker to
43	28	100.0	14	16	R87024	Flexible linker se
44	28	100.0	14	18	W23417	Linker peptide for
45	28	100.0	14	19	W64498	Neurotoxic beta-am

ALIGNMENTS

RESULT 1
R34034
ID R34034 standard; Protein; 5 AA.
XX
AC R34034;
XX
DT 13-AUG-1993 (first entry)
XX
DE Linking sequence whose encoding DNA can be ligated between an
DE apo A-I- and a B-100-encoding DNA sequence.
XX
KW Lipoprotein; apoprotein; B-100; A-I; LDL; HDL; assay.
XX
OS Synthetic.
XX
PN WO9307165-A.
XX
PD 15-APR-1993.
XX
PF 09-OCT-1992; 92WO-US08634.
XX
PR 09-OCT-1991; 91US-0774633.
PR 08-OCT-1992; 92US-0555555.
PR 28-JUN-1992; 92US-0901706.
XX
PA (SCRI) SCRIPPS RES INST.
XX
PI Curtiss LK, Koduri KR, Smith RS, Witztum JL, Young SG;
XX
DR WPI; 1993-134378/16.
XX
PT Polypeptide mimic of native apo B-100 and native apo A-I - useful
PT in assays for LDL and HDL in plasma samples
XX
PS Disclosure; Page 14 and page 35; 137pp; English.

```
XX
CC   The inventors claim a portion of the polypeptide contg. apo B-100
CC   that immunoreacts with antibodies secreted by the hybridoma MB47
CC   having ATCC Accession No. 8746.  Polypeptides specifically claimed
CC   include residues 217-297, 216-310, 216-331, 216-352, 216-377, 1-377,
CC   205-297, 173-297, 140-297.  DNA sequences encoding the polypeptides
CC   are also claimed.  Also claimed are a fusion polypolypeptide that
CC   contains: (a) a first amino acid residue sequence up to 250 residues
CC   in length that includes residues 120-135 of apo A-I, (b) a second
CC   amino acid residue sequence up to 375 residues in length that
CC   includes residues 217-297 of apo B-100 and DNA encoding it.
XX
SQ   Sequence   5 AA;


  Query Match            100.0%;  Score 28;  DB 14;  Length 5;
  Best Local Similarity  100.0%;  Pred. No. 2.1e+05;
  Matches    5;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GGGGS 5
          |||||
Db      1 ggggs 5


RESULT   2
R72707
ID   R72707 standard; Peptide; 5 AA.
XX
AC   R72707;
XX
DT   31-OCT-1995  (first entry)
XX
DE   Linker for apo A-I and apo B-100 fusion polypeptide.
XX
KW   Apo A-I; LDL cholesterol; low density lipoprotein;
KW   fusion polypeptide; linker.
XX
OS   Synthetic.
XX
PN   US5408038-A.
XX
PD   18-APR-1995.
XX
PF   09-OCT-1991;   91US-0774633.
XX
PR   09-OCT-1991;   91US-0774633.
PR   18-JUN-1992;   92US-0901706.
PR   08-OCT-1992;   92US-0959946.
XX
PA   (SCRI ) SCRIPPS RES INST.
XX
PI   Curtiss LK,  Koduri KR,  Smith RS,  Witztum JL,  Young SG;
XX
DR   WPI; 1995-161146/21.
XX
PT   New apo:lipoprotein B-100 peptide(s) and fusion peptide(s) - used
PT   in assay systems for detecting LDL and HDL cholesterol levels in
PT   body fluids.
XX
PS   Disclosure; Column 18; 41pp; English.
XX
CC   A dispersible apo A-I/B-100 fusion polypeptide is claimed which
CC   contains a first AA sequence of apo A-I (see R72605) and that includes
CC   at least AA sequence positions 120-135 (see R72606). The two
CC   sequences are operatively linked. An exemplary linking sequence is
CC   R72707 whose encoding DNA can be ligated between an apo A-I and a
CC   B-100 encoding DNA sequence.
XX
SQ   Sequence   5 AA;


  Query Match            100.0%;  Score 28;  DB 16;  Length 5;
  Best Local Similarity  100.0%;  Pred. No. 2.1e+05;
  Matches    5;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GGGGS 5
          |||||
Db      1 ggggs 5


RESULT   3
R95062
ID   R95062 standard; Peptide; 5 AA.
XX
AC   R95062;
XX
DT   18-AUG-1996  (first entry)
XX
DE   scFv spacer peptide.
XX
KW   Nucleic acid transfer system; gene transfer; gene therapy;
KW   cell targeting; multidomain protein; vector; cancer; scFv;
KW   single chain antibody.
XX
OS   Synthetic.
XX
PN   WO9613599-A1.
XX
PD   09-MAY-1996.
XX
PF   31-OCT-1995;   95WO-EP04270.
XX
PR   01-NOV-1994;   94EP-0810627.
XX
PA   (WELS/) WELS W.
XX
PI   Fominaya J,  Wels W;
XX
DR   WPI; 1996-239505/24.
XX
PT   Nucleic acid transfer system for gene therapy, e.g. against cancer
PT   - includes toxin translocation domain to target nucleic acid to
PT   specific cell
XX
PS   Disclosure; Page 8; 106pp; English.
XX
CC   A flexible spacer peptide (R95062) is used to link the light chain
CC   variable domain to the heavy chain variable domain of a single
CC   chain recombinant antibody (scFv).  The scFv may be derived from
CC   a monoclonal antibody, e.g. MAb FRP5, and forms the ligand domain
CC   of a multidomain protein (see also R95053 and R95056-58) that is used
CC   with an effector nucleic acid in a novel nucleic acid transfer system
CC   suitable for gene therapy.  The ligand domain has a target cell
CC   recognition function and allows cellular internalization of the
CC   multidomain protein/nucleic acid complex.
XX
SQ   Sequence   5 AA;


  Query Match            100.0%;  Score 28;  DB 17;  Length 5;
  Best Local Similarity  100.0%;  Pred. No. 2.1e+05;
  Matches    5;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 GGGGS 5
          |||||
Db      1 ggggs 5


RESULT   4
W17094
ID   W17094 standard; peptide; 5 AA.
XX
AC   W17094;
XX
DT   14-SEP-1999  (first entry)
XX
```

DE Gly(4)-Ser linker peptide for chimeric protein construct.
XX
KW Haematopoietic protein; human; granulocyte-colony stimulating factor;
KW G-CSF; interleukin; c-mpl ligand; linker; gene therapy; aplastic anaemia;
KW stem cell expansion; leukopaenia; neutropaenia; vector; bone marrow;
KW thrombocytopaenia; blood cell activation; growth.
XX
OS Synthetic.
XX
PN WO9712985-A2.
XX
PD 10-APR-1997.
XX
PF 04-OCT-1996; 96WO-US15774.
XX
PR 05-OCT-1995; 95US-0004834.
XX
PA (SEAR) SEARLE & CO G D.
XX
PI Bauer SC, Baum CM, Caparon MH, Feng Y, Giri JG;
PI Klein BK, Lee SC, McKearn JP, McWherter CA, Staten NR;
PI Summers NL, Zurfluh L;
XX
DR WPI; 1997-226228/20.
XX
PT Multi-functional haematopoietic receptor agonists - used to
PT stimulate the production of haematopoietic cells in patients
XX
PS Disclosure; Page 33; 616pp; English.
XX
CC The invention relates to a novel haematopoietic protein (HP) comprising
CC an amino acid (AA) sequence of formula: R1-L1-R2; R2-L1-R1; R1-R2; or
CC R2-R1; where R1 and R2 are independently selected from: (I) a modified
CC human granulocyte-colony stimulating factor (hG-CSF) AA sequence;
CC (II) a modified human interleukin-3 (hIL-3) AA sequence; (III) a modified
CC human c-mpl ligand; and a colony stimulating factor (CSF); and L1 = a
CC linker capable of linking R1 to R2. This sequence represents an example
CC of a linker used to construct the proteins of the invention.
CC Vectors comprising the nucleic acid molecules are useful for the
CC recombinant production of HP. The nucleic acid molecules are useful in
CC gene therapy. The HP's are useful for stimulating the production of
CC haematopoietic cells in patients, selective ex vivo expansion of stem
CC cells and for treatment of haematopoietic disorders. Disorders that
CC can be treated include leukopaenia, neutropaenia, aplastic anaemia and
CC thrombocytopaenia. In vitro uses include the ability to stimulate bone
CC marrow and blood cell activation and growth before infusion into the
CC patients.
SQ Sequence 5 AA;

Query Match 100.0%; Score 28; DB 18; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 1 ggggs 5

RESULT 5
W19543
ID W19543 standard; peptide; 5 AA.
XX
AC W19543;
XX
DT 19-FEB-1998 (first entry)
XX
DE Chimeric protein pentapeptide linker for the MBP moiety and PE moiety.
XX
KW Pseudomonas exotoxin; myelin basic protein; chimeric protein;
KW autoimmune disease; multiple sclerosis; human.
XX
OS Synthetic.
XX
PN WO9719179-A1.
XX
PD 29-MAY-1997.
XX
PF 17-NOV-1996; 96WO-IL00151.
XX
PR 26-DEC-1995; 95IL-0116559.
PR 17-NOV-1995; 95IL-0116044.
XX
PA (YISS) YISSUM RES & DEV CO.
XX
PI Beraud E, Lorberboum-Galski H, Marianovsky I, Steinberger I;
PI Yarkoni S;
XX
DR WPI; 1997-298116/27.
XX
PT New Pseudomonas exotoxin-myelin basic protein chimeric proteins -
PT used for the treatment of auto:immune diseases, particularly
PT multiple sclerosis
XX
PS Claim 6; Page 29; 54pp; English.
XX
CC New chimeric proteins have been developed comprising a Pseudomonas
CC aeruginosa exotoxin (PE) moiety linked to a myelin basic protein (MBP)
CC moiety selected from: (a) MBP; (b) amino acids 69-88 of guinea-pig MBP
CC or an antigenic portion; (c) amino acids 84-102 of human MBP or an
CC antigenic portion; (d) amino acids 143-168 of human MBP or an antigenic
CC portion; and (e) an amino acid sequence in which one or more amino acids
CC have been deleted, added, substituted or mutated in the amino acid
CC sequences of (a), (b), (c), or (d), the modified sequences retaining at
CC least 75% homology with the amino acid sequences. The present sequence
CC represents the preferred pentapeptide linker used to link the MBP moiety
CC and PE moiety in a chimeric protein. The chimeric proteins can be used
CC for the treatment of autoimmune diseases such as multiple sclerosis. The
CC chimeric proteins can specifically target and kill MBP specific T cells
CC while having no effect on non-target cells.
XX
SQ Sequence 5 AA;

Query Match 100.0%; Score 28; DB 18; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 1 ggggs 5

RESULT 6
Y43496
ID Y43496 standard; Peptide; 5 AA.
XX
AC Y43496;
XX
DT 26-JAN-2000 (first entry)
XX
DE Linker for dual avb3 receptor/metastasis-associated receptor ligands.
XX
KW Interferon-alpha-2b; IFN-alpha; avb3 antagonist; avb3 receptor ligand;
KW metastasis-associated receptor ligand; angiogenesis; cell proliferation;
KW anti-angiogenic protein; avb3-integrin; cancer; arthritis;
KW macular degeneration; diabetic retinopathy; hemangioma; psoriasis;
KW osteoporosis; thrombosis; angina; atherosclerosis; antiviral;
KW antibacterial; antifungal.
XX
OS Homo sapiens.
XX
PN WO9951638-A1.
XX
PD 14-OCT-1999.
XX

PF 07-APR-1999; 99WO-US04295.
XX
PR 08-APR-1998; 98US-0081074.
XX
PA (SEAR) SEARLE & CO G D.
XX
PI Tjoeng FS, Fok KF;
XX
DR WPI; 1999-620196/53.
XX
PT New conjugates of integrin antagonist and ligand for
PT metastasis-associated receptor, for treating angiogenesis-related
PT diseases, e.g. cancer -
XX
PS Claim 18; Page 86; 108pp; English.
XX
CC The present sequence represents a linker used to join the avb3
CC antagonist and the metastasis-associated receptor ligand, in the
CC pharmaceutical compounds of the invention. These compounds are dual
CC avb3 receptor/metastasis-associated receptor ligands, and inhibit
CC angiogenesis and thus proliferation of (cancer) cells. One component
CC binds to the avb3 receptor and the other to a metastasis-associated
CC receptor. The avb3 antagonists may also be conjugated to anti-angiogenic
CC proteins, such as IFN-alpha and its derivatives. The compounds are used
CC to treat angiogenesis-related disorders (mediated by the avb3-integrin),
CC specifically cancer (of lung, breast, ovary, prostate, stomach, colon,
CC kidney or bladder, also melanoma, hepatoma, sarcoma and lymphoma),
CC arthritis and macular degeneration, and also diabetic retinopathy,
CC hemangioma, psoriasis, osteoporosis, thrombosis, angina, atherosclerosis
CC etc. The compounds may also be useful as antiviral, antibacterial and
CC antifungal agents.
XX
SQ Sequence 5 AA;

Query Match 100.0%; Score 28; DB 20; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 1 ggggs 5

RESULT 7
Y33597
ID Y33597 standard; Protein; 5 AA.
XX
AC Y33597;
XX
DT 20-DEC-1999 (first entry)
XX
DE VH-VL domain linker peptide #9.
XX
KW Antigen binding; single chain; variable domain; VH domain; light chain;
KW heavy immunoglobulin chain; VL domain; anticancer; antiviral; tumor;
KW antibacterial; antimalarial; antiinflammatory; treatment; prevention;
KW diagnosis; vaccine; autoimmune disease; inflammation; blood disorder;
KW transplant rejection; arthritis; nervous system disorder; infection.
XX
OS Synthetic.
XX
PN DE19816141-A1.
XX
PD 14-OCT-1999.
XX
PF 09-APR-1998; 98DE-1016141.
XX
PR 09-APR-1998; 98DE-1016141.
XX
PA (HMRI) HOECHST MARION ROUSSEL DEUT GMBH.
XX
PI Kontermann R, Sedlacek H, Mueller R;
XX
DR WPI; 1999-581511/50.
XX
PT New polyspecific binding agents containing variable heavy and light
PT constructs connected via peptide linker, used for treatment, prevention
PT or diagnosis of e.g. cancer -
XX
PS Claim 7; Page 17; 20pp; German.
XX
CC This sequence represents a novel single-chain molecule (I) that binds
CC multiple antigens and comprises two variable domains of heavy
CC immunoglobulin chains (VH), having specificities A and B and two
CC variable domains of light chains (VL), also with specificities A and B.
CC The domains are provided as two VH-VL constructs which are attached via
CC a peptide (P). Any VH and VL may be replaced by their functional
CC fragments. The products of the invention have anticancer, antiviral,
CC antibacterial, antimalarial and antiinflammatory activity. (I) are used
CC to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune
CC diseases and inflammation (e.g. transplant rejection and arthritis),
CC blood disorders (e.g. of the coagulation and/or circulatory systems, such
CC as anemia, leucopenia, thrombocytopenia and hypertension), nervous system
CC disorders and/or infections (by viruses or bacteria, or malaria),
CC including, when (I) include a fusogenic peptide, use for gene transfer.
CC (I) are produced simply and in predominantly homogeneous form, in a wide
CC variety of hosts, either in secreted or membrane-bound forms. This
CC sequence represents a VH-VL domain linker peptide which is used to
CC illustrate the method of the invention.
XX
SQ Sequence 5 AA;

Query Match 100.0%; Score 28; DB 20; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 1 ggggs 5

RESULT 8
Y25357
ID Y25357 standard; peptide; 5 AA.
XX
AC Y25357;
XX
DT 06-SEP-1999 (first entry)
XX
DE IFNAR2/IFN-beta complex peptide fragment 1.
XX
KW IFNAR2; IFN-beta; type I interferon; IFNAR/IFN complex; IFN; antiviral;
KW human interferon alpha/beta receptor; anticancer; immunomodulatory;
KW anti-arthritic; antidiabetic; treatment; hepatitis; viral infection;
KW hairy cell leukemia; Kaposi's sarcoma; multiple myeloma; cancer; lupus;
KW diabetes; multiple sclerosis; rheumatoid arthritis; myasthenia gravis;
KW acquired immune deficiency syndrome.
XX
OS Synthetic.
XX
PN WO9932141-A1.
XX
PD 01-JUL-1999.
XX
PF 18-DEC-1998; 98WO-US26926.
XX
PR 19-DEC-1997; 97US-0068295.
XX
PA (ISTF) ARS APPLIED RES SYSTEMS HOLDING NV.
PA (MCIN/) MCINNIS P G.
XX
PI Cunningham M, El Tayar N, McKenna S, Sherris D;
PI Tepper M;
XX

DR WPI; 1999-405115/34.
XX
PT Prolonging in vivo activity of type I interferon by complexing
XX
PS Example 8; Page 76; 86pp; English.
XX
CC This invention describes a novel method for prolonging the in vivo effect
CC of type I interferon (IFN) by administering IFN as a complex (A) with a
CC subunit (I) of the human interferon alpha/beta receptor (IFNAR). The
CC product of the invention has antiviral, anticancer, immunomodulatory,
CC anti-arthritic and antidiabetic activity. (A) have the antiviral,
CC anticancer and immunomodulating activities of IFN, e.g. for treating
CC hepatitis and other viral infections, hairy cell leukemia, Kaposi's
CC sarcoma, multiple myeloma and other cancers, multiple sclerosis,
CC rheumatoid arthritis, myasthenia gravis, diabetes, acquired immune
CC deficiency syndrome and lupus. When complexed in (A), the storage life of
CC IFN is increased (i.e. it is stabilized against oligomerization, without
CC the need for storage at acidic pH) and its biological effect is
CC potentiated.
XX
SQ Sequence 5 AA;

Query Match 100.0%; Score 28; DB 20; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 1 ggggs 5

RESULT 9
Y02127
ID Y02127 standard; Protein; 5 AA.
XX
AC Y02127;
XX
DT 16-JUL-1999 (first entry)
XX
DE Peptide linker used to make multifunctional proteins.
XX
KW Angiostatin; endostatin; interferon; thrombospondin;
KW interferon-inducible protein; platelet factor 4; anti-angiogenic;
KW anti-tumor; multifunctional protein; angiogenic-mediated disease;
KW cancer; diabetic retinopathy; macular degeneration; arthritis;
KW tumor cell production; peptide linker.
XX
OS Homo sapiens.
XX
PN WO9916889-A1.
XX
PD 08-APR-1999.
XX
PF 30-SEP-1998; 98WO-US20464.
XX
PR 01-OCT-1997; 97US-0060609.
XX
PA (SEAR) SEARLE & CO G D.
XX
PI Bolanowski MA, Caparon MH, Casperson GF, Gregory SA;
PI Klein BK, McKearn JP;
XX
DR WPI; 1999-255098/21.
XX
PT New multifunctional proteins useful for treating angiogenic-mediated
PT diseases
XX
PS Disclosure; Page 111; 121pp; English.
XX
CC The specification describes multifunctional proteins which comprise
CC combinations of angiostatin, endostatin, interferon, thrombospondin,
CC interferon-inducible protein and platelet factor 4, and have
CC anti-angiogenic and/or anti-tumor activity. The multifunctional protein
CC may exhibit useful properties such as having similar or greater
CC biological activity when compared to a single factor or by having
CC improved half-life or decreased adverse side effects, or a combination
CC of these properties. The proteins can be used for treating an
CC angiogenic-mediated disease, e.g. cancer, diabetic retinopathy, macular
CC degeneration, or arthritis. They can also be used for inhibiting the
CC production of tumor cells (characteristic of lung, breast, ovarian,
CC prostate, pancreatic, gastric, colon, renal, bladder cancers; melanoma,
CC hepatoma, sarcoma and lymphoma) in a patient and for inhibiting tumor
CC growth. Y02125-32 represent peptide linkers used to make the
CC multifunctional proteins of the invention.
XX
SQ Sequence 5 AA;

Query Match 100.0%; Score 28; DB 20; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 1 ggggs 5

RESULT 10
Y83210
ID Y83210 standard; Peptide; 5 AA.
XX
AC Y83210;
XX
DT 24-JUL-2000 (first entry)
XX
DE Peptide linker used in construction of a_vb_3 integrin/IFN alpha.
XX
KW Biconjugate; a_vb_3 integrin; interferon alpha; angiogenesis;
KW cancer; tumour; osteoporosis; Paget's disease; Karposi's sarcoma;
KW periodontal disease; metastasis; neoplasia; retinopathy; arthritis;
KW psoriasis; leukaemia; malignant melanoma; atherosclerosis;
KW smooth muscle cell migration; inhibition; treatment; antagonist;
KW angina; thrombosis; restenosis; antiviral; antifungal;
KW antibacterial.
XX
OS Synthetic.
XX
PN WO200009143-A1.
XX
PD 24-FEB-2000.
XX
PF 07-APR-1999; 99WO-US04296.
XX
PR 13-AUG-1998; 98US-0096442.
XX
PA (SEAR) SEARLE & CO G D.
XX
PI Fok KF, Tjoeng FS;
XX
DR WPI; 2000-205894/18.
XX
PT New bioconjugates comprising an avb3 antagonist and a
PT metastatic-associated receptor ligand, useful for treating cancer and
PT other angiogenic diseases, or as antiviral, antifungal or antibacterial
PT agents
XX
PS Claim 19; Page 88; 123pp; English.
XX
CC Bioconjugates comprising one or more a_vb_3 antagonist moieties
CC coupled to a peptide or polypeptide having anti-angiogenic properties
CC can be used for treating a human patient with an
CC angiogenesis-mediated disease, e.g. cancer, arthritis, or macular
CC degeneration. The a_vb_3 integrin is normally associated with
CC endothelial cells but can promote the formation of blood vessels
CC (angiogenesis) in tumours. The a_vb_3 integrin is also known to

CC play a role in tumour metastasis, neoplasia, osteoporosis,
CC Paget's disease, retinopathy, arthritis, periodontal disease,
CC psoriasis and smooth muscle cell migration. Interferon alpha is a
CC family of proteins which possess complex antiviral, antineoplastic
CC and immunomodulating activities. Interferon alpha is effective
CC against a variety of cancers including hairy cell leukaemia,
CC chronic myelogenous leukaemia, malignant melanoma and Karposi's
CC sarcoma. Multi-functional bioconjugates comprising both a_vb_3
CC antagonists and interferon alpha 2b can exhibit greater biological
CC activity when compared to a single factor or having improved
CC half-life or decreased adverse side effects, or a combination of
CC these properties. They can be used for inhibiting elevated levels
CC of tumor antigens, inhibiting the proliferation of tumor cells and
CC inhibiting tumor growth. The bioconjugates can also be used for
CC treating e.g. osteoporosis, humoral hypercalcemia of malignancy,
CC Paget's disease, retinopathy including diabetic retinopathy,
CC arthritis, including rheumatoid arthritis, periodontal disease,
CC psoriasis, thrombosis, angina, atherosclerosis, smooth muscle cell
CC migration and restenosis in a mammal. They are also useful as
CC antiviral, antifungal and antibacterial agents. This sequence is a
CC peptide linker used in the construction of the multi-functional
CC bioconjugates.
XX
SQ Sequence 5 AA;

Query Match 100.0%; Score 28; DB 21; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 1 ggggs 5

RESULT 11
Y43750
ID Y43750 standard; Peptide; 5 AA.
XX
AC Y43750;
XX
DT 11-FEB-2000 (first entry)
XX
DE Linker used to construct a bispecific single-chain antibody.
XX
KW bscCD19xCD3 antibody; bispecific single-chain fragment; CD19 antigen;
KW CD3 antigen; CD19-positive target cell; T-cell stimulation;
KW cytotoxic T-lymphocyte; B-cell malignancy; myasthenia gravis;
KW B-cell mediated autoimmune disease; Morbus Basedow;
KW Hashimoto thyroiditis; Goodpasture syndrome; B-cell depletion;
KW non-Hodgkin lymphoma; gene therapy; cancer; viral disease.
XX
OS Synthetic.
XX
PN WO9954440-A1.
XX
PD 28-OCT-1999.
XX
PF 21-APR-1999; 99WO-EP02693.
XX
PR 21-APR-1998; 98EP-0107269.
XX
PA (DOER/) DOERKEN B.
PA (RIET/) RIETHMUELLER G.
XX
PI Kufer P, Lutterbuese R, Bargou R, Loeffler A;
XX
DR WPI; 2000-013241/01.
XX
PT Novel multifunctional polypeptide for treating B-cell malignancies
PT especially non-Hodgkin lymphoma -
XX
PS Claim 10; Page 49; 91pp; English.
XX
CC The present sequence represents a linker used in the construction
CC of bispecific single-chain polypeptides of the invention. These
CC polypeptides comprise domains providing binding-site of immunoglobulin
CC chains or antibodies specifically recognizing CD19 and CD3 antigen.
CC The polypeptide destroys CD19-positive target cells without any need
CC of T-cell pre and/or co-stimulation, by recruiting cytotoxic
CC T-lymphocytes and so specific lysis by T-cells rather than a direct
CC effect by an antibody is achieved. The bispecific single-chain
CC polypeptides, or nucleotides encoding them, are used for the treatment
CC of B-cell malignancies, B-cell mediated autoimmune diseases like
CC myasthenia gravis, Morbus Basedow, Hashimoto thyroiditis or Goodpasture
CC syndrome or for the depletion of B- cells and more particularly
CC non-Hodgkin lymphoma in mammals preferably human. They can also delay
CC the pathological conditions caused by these diseases, and can be used
CC for detecting these diseases. The polynucleotide is used for gene
CC therapy. The polypeptides are also used for identifying compounds
CC modulating B-cell/T-cell mediated immune response with can in turn be
CC used for treating cancer, its related diseases and also for inhibiting
CC viral diseases by preventing viral infection.
XX
SQ Sequence 5 AA;

Query Match 100.0%; Score 28; DB 21; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 1 ggggs 5

RESULT 12
Y54917
ID Y54917 standard; peptide; 5 AA.
XX
AC Y54917;
XX
DT 14-FEB-2000 (first entry)
XX
DE Linker from IL-12 fusion protein.
XX
KW Interleukin-12; IL-12; fusion protein; IL-12 p35 subunit; B7 protein;
KW IL-12 p40 subunit; gene therapy; tumour; leukaemia; linker.
XX
OS Synthetic.
XX
PN US5994104-A.
XX
PD 30-NOV-1999.
XX
PF 08-NOV-1996; 96US-0751767.
XX
PR 08-NOV-1996; 96US-0751767.
XX
PA (UNLO) ROYAL FREE HOSPITAL SCHOOL MED.
XX
PI Anderson RJ, Prentice HG, MacDonald ID;
XX
DR WPI; 2000-038261/03.
XX
PT Nucleic acid constructs encoding interleukin-12 fusion proteins useful
PT for treating leukemia and other cancers -
XX
PS Claim 3; Column 93; 73pp; English.
XX
CC This sequence represents a linker that can be used in an interleukin-12
CC fusion protein. The invention relates to an isolated nucleic acid
CC construct (I) comprising a region encoding an interleukin-12 (IL-12)
CC fusion protein (comprising an IL-12 p35 subunit, an IL-12 p40 subunit and
CC a linker peptide (joining the subunits)) and a region encoding a B7
CC protein. (I) may be used to produce IL-12 fusion proteins according to

CC standard recombinant DNA methodologies. The fusion proteins may be
CC produced either in vitro in a fermentation culture or in vivo as part of
CC a gene therapy protocol (in this case (I) is used to transform a patients
CC cells, which then secrete the functional polypeptide to supplement the
CC patients own production of IL-12 or to rectify mutations which lead to
CC the expression of inactive polypeptides). The fusion proteins produced in
CC this way may be used to treat any disease which responds to IL-12 such as
CC tumours (both solid and dispersed of the kidney, breast, colon, ovarian
CC and cervical tumours and melanomas) and in particular, tumours of the
CC blood such as leukaemia. Alternatively, the polypeptides may be used as
CC antigens in the production of antibodies to IL-12 and to assay for
CC agonists and antagonists of its activity. The antibodies and antagonists
CC may be used to inhibit the activity of IL-12. (I) may also be used
CC diagnostically as a probe which hybridizes to sequences encoding IL-12
CC and the antibodies may be used to detect the presence of IL-12
CC polypeptides in samples. They may be used diagnostically to quantitate
CC the expression of the polypeptide by patients and hence which subjects
CC may be in need of restorative therapy.
XX
SQ Sequence 5 AA;

Query Match 100.0%; Score 28; DB 21; Length 5;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 1 ggggs 5

RESULT 13
R62168
ID R62168 standard; Protein; 6 AA.
XX
AC R62168;
XX
DT 03-MAY-1995 (first entry)
XX
DE U1 snRNP 70K protein amino acids 5-10, homologous to HSV-1 IE motif.
XX
KW Small ribonucleoprotein complex; U1 snRNP; 70K protein; epitope;
KW autoantibody; immunoinfective cluster virus; nuclear protein antigen;
KW systemic rheumatic disorder; herpes simplex virus; HSV-1;
KW immediate early protein; systemic lupus erythematosus; scleroderma.
XX
OS Homo sapiens.
XX
PN WO9420141-A.
XX
PD 15-SEP-1994.
XX
PF 10-MAR-1994; 94WO-US02631.
XX
PR 11-MAR-1993; 93US-0029850.
XX
PA (UYSC-) UNIV SOUTHERN CALIFORNIA.
XX
PI Douvas A, Ehresmann G, Takehana Y;
XX
DR WPI; 1994-302689/37.
XX
PT Methods for treating immunoinfective cluster virus infections -
PT utilise antibodies or fragments characteristic of auto antibodies
PT produced by patients with rheumatic disorders
XX
PS Disclosure; Page 63; 106pp; English.
XX
CC A comparison of the U1 snRNP 70K protein sequence with proteins
CC from immunoinfective cluster viruses revealed widespread
CC homologies. The importance of these homologous motifs is that they
CC are epitopes for autoantibodies occurring in high titres in systemic
CC rheumatic disorders. Sera from such patients could be used for
CC treatment of immunoinfective cluster virus infections.
XX
SQ Sequence 6 AA;

Query Match 100.0%; Score 28; DB 15; Length 6;
Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGS 5
|||||
Db 2 ggggs 6

RESULT 14
W17095
ID W17095 standard; peptide; 6 AA.
XX
AC W17095;
XX
DT 14-SEP-1999 (first entry)
XX
DE Gly(5)-Ser linker peptide for chimeric protein construct.
XX
KW Haematopoietic protein; human; granulocyte-colony stimulating factor;
KW G-CSF; interleukin; c-mpl ligand; linker; gene therapy; aplastic anaemia;
KW stem cell expansion; leukopaenia; neutropaenia; vector; bone marrow;
KW thrombocytopaenia; blood cell activation; growth.
XX
OS Synthetic.
XX
PN WO9712985-A2.
XX
PD 10-APR-1997.
XX
PF 04-OCT-1996; 96WO-US15774.
XX
PR 05-OCT-1995; 95US-0004834.
XX
PA (SEAR) SEARLE & CO G D.
XX
PI Bauer SC, Baum CM, Caparon MH, Feng Y, Giri JG;
PI Klein BK, Lee SC, McKearn JP, McWherter CA, Staten NR;
PI Summers NL, Zurfluh L;
XX
DR WPI; 1997-226228/20.
XX
PT Multi-functional haematopoietic receptor agonists - used to
PT stimulate the production of haematopoietic cells in patients
XX
PS Disclosure; Page 33; 616pp; English.
XX
CC The invention relates to a novel haematopoietic protein (HP) comprising
CC an amino acid (AA) sequence of formula: R1-L1-R2; R2-L1-R1; R1-R2; or
CC R2-R1; where R1 and R2 are independently selected from: (I) a modified
CC human granulocyte-colony stimulating factor (hG-CSF) AA sequence;
CC (II) a modified human interleukin-3 (hIL-3) AA sequence; (III) a modified
CC human c-mpl ligand; and a colony stimulating factor (CSF); and L1 = a
CC linker capable of linking R1 to R2. This sequence represents an example
CC of a linker used to construct the proteins of the invention.
CC Vectors comprising the nucleic acid molecules are useful for the
CC recombinant production of HP. The nucleic acid molecules are useful in
CC gene therapy. The HP's are useful for stimulating the production of
CC haematopoietic cells in patients, selective ex vivo expansion of stem
CC cells and for treatment of haematopoietic disorders. Disorders that
CC can be treated include leukopaenia, neutropaenia, aplastic anaemia and
CC thrombocytopaenia. In vitro uses include the ability to stimulate bone
CC marrow and blood cell activation and growth before infusion into the
CC patients.
SQ Sequence 6 AA;

Query Match 100.0%; Score 28; DB 18; Length 6;

Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 GGGGS 5
          |||||
Db      2 ggggs 6
```

RESULT 15
W21967
ID W21967 standard; peptide; 6 AA.
XX
AC W21967;
XX
DT 03-DEC-1997 (first entry)
XX
DE Linker #1 for immunotoxin containing Pseudomonas exotoxin.
XX
KW PCR; primer; amplify; polymerase chain reaction; antibody; immunotoxin;
KW variable heavy chain; VH; murine monoclonal antibody; Lewisy; carcinoma;
KW carbohydrate antigen; Pseudomonas exotoxin; proteolytic activation;
KW cytotoxic activity; tumour; autoimmune condition; rheumatoid arthritis;
KW graft versus host disease; organ transplant rejection; type I diabetes;
KW multiple sclerosis; systemic lupus erythematosus; myasthenia gravis;
KW T cell; B cell; cytosol; bone marrow; transplant; therapy.
XX
OS Synthetic.
XX
PN WO9713529-A1.
XX
PD 17-APR-1997.
XX
PF 11-OCT-1996; 96WO-US16327.
XX
PR 13-OCT-1995; 95US-0005388.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Kuan C, Pastan I;
XX
DR WPI; 1997-235666/21.
XX
PT Immuno:toxin(s) comprising Pseudomonas exotoxin linked to
PT di:sulphide stabilised variable heavy and light chain regions of an
PT antibody - useful for killing target cells bearing characteristic
PT marker
XX
PS Claim 5; Page 49; 64pp; English.
XX
CC W21967-W21969 represent linkers used in the immunotoxins of the
CC invention. The immunotoxins bind to target cells, and comprise, a
CC Pseudomonas exotoxin (PE) that does not need proteolytic activation for
CC cytotoxic activity fused to a VH framework region of an Fv antibody (Ab)
CC fragment. The VH chain region is bound through at least one disulphide
CC bond to a variable light (VL) chain framework region. The PE is lacking
CC residues 1-279 and is at least 10-fold more cytotoxic to the target cells
CC than an immunotoxin comprising PE attached to a VH chain framework region
CC of an Fv Ab fragment lacking a disulphide bond to a VL chain framework
CC region. These sequences are used to join the VH chain region to the PE.
CC The immunotoxins can be used for killing target cells in the treatment of
CC tumours, autoimmune conditions, graft versus host disease, organ
CC transplant rejection, type I diabetes, multiple sclerosis, rheumatoid
CC arthritis, systemic lupus erythematosus, myasthenia gravis, etc, all
CC caused by T and B cells. They can also be used to deliver an antibody to
CC the cytosol of a cell, and in vitro in the elimination of harmful cells
CC from bone marrow before transplant. The immunotoxins have high
CC cytotoxicity to target cells and a small size to provide greater
CC penetration to target cells.
XX
SQ Sequence 6 AA;

Query Match 100.0%; Score 28; DB 18; Length 6;

Best Local Similarity 100.0%; Pred. No. 2.1e+05;
Matches 5; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 GGGGS 5
          |||||
Db      2 ggggs 6
```

Search completed: March 15, 2001, 10:52:21
Job time: 971 sec